



October 3, 1997

MEMORANDUM

TO: Orville Green, Assistant Administrator
Air and Hazardous Waste

FROM: Robert Baldwin, Air Quality Engineer
Air Quality Permitting Bureau
Operating Permits Section 

THROUGH: Susan J. Richards, Air Quality Permits Manager
Air Quality Permitting Bureau
Operating Permits Section 

SUBJECT: Technical Analysis for Proposed Tier II Operating Permit #057-00007
Gem State Lumber Company, Juliaetta

PURPOSE

The purpose for this memorandum is to satisfy the requirements of IDAPA 16.01.01 Sections 400 through 406 (Rules for the Control of Air Pollution in Idaho) for issuing Operating Permits.

FACILITY DESCRIPTION

Gem State Lumber is a sawmill facility. Gem State Lumber receives (dead) cedars logs by truck to process into 3"x3" posts. The sawmill generates residual wood products which are consumed by the boilers or are shipped off site by truck.

PROJECT DESCRIPTION

This project is for an Operating Permit (OP) for the following existing point and fugitive emission sources.

Point Sources:

Fuel Burning Equipment

- (1) Boiler #1 - hogged fuel burning with a maximum rated capacity of 205 horsepower. This boiler was installed in 1930 and is not a NSPS source.

Boiler Specifications:

Manufacturer:	William's Brothers
Type:	Dutch Oven
Maximum Rate:	205 HP
Fuel:	Hogged Fuel

Stack Design Specifications:

Height:	95 feet
Exit Diameter:	42 inches
Exit Gas Flow Rate:	14,895 ACFM
Exit Temperature:	500°F

- (2) Boiler #2 - hogged fuel burning with a maximum rated capacity of 150 horsepower. This boiler was installed in 1930 and is not a NSPS source.

Boiler Specifications:

Manufacturer:	William's Brothers
Type:	Dutch Oven
Maximum Rate:	150 HP
Fuel:	Hogged Fuel
Height:	85 feet
Exit Diameter:	32 inches
Exit Gas Flow Rate:	10,856 ACFM
Exit Temperature:	500°F

Lumber Dry Equipment

- (1) Kiln #1

Kiln Specifications:

Manufacturer:	Unknown
Model:	Unknown
Installation Date:	Unknown

- (2) Kiln #2

Kiln Specifications:

Manufacturer:	Unknown
Model:	Unknown
Installation Date:	Unknown

Cyclones

- (1) Shavings Bin Cyclone

Cyclone Specifications:

Manufacturer:	Unknown
Model:	Unknown
Installation Date:	Unknown

- (2) Boiler Fuel Shavings Cyclone

Cyclone Specifications:

Manufacturer:	Unknown
Model:	Unknown
Installation Date:	Unknown

Fugitive Sources:

- (1) Debarker
- (2) Log Cut-off Saw
- (3) Hammer Hog
- (4) Chip Screen
- (5) Wood By-product Bins
- (6) Unpaved Roads

SUMMARY OF EVENTS

On February 18, 1997, The Division of Environmental Quality (DEQ) received Gem State Lumber's Tier II operating permit application. After review of the material submitted, DEQ determined that the application was administratively complete on March 20, 1997. On April 7, 1997, a telephone conversation between Richard Hitchcock, owner of Gem State Lumber, and Bob Baldwin, Air Quality Engineer of DEQ, agreed to the reduction of the operating hours for the boiler and kilns to 6000 hours annually.

On July 2, 1997, a proposed Tier II OP was issued for public comment. The public comment period was held from July 9, 1997, through August 8, 1997. Comments were received by DEQ in the form of faxes on July 23, 1997, and July 28, 1997. The comments and DEQ's responses were incorporated into the technical analysis and operating permit.

DISCUSSION

1. Emission Estimates

Emission estimates for the combustion units, kilns, cyclones, and fugitive sources were submitted by Gem State Lumber (GSL). DEQ's examination of the permit application indicated GSL's desire for a Tier II permit. A reevaluation of the emissions using appropriate AP-42 emission factors indicated that the facility's potential to emit for the requested hours of operation exceed 100 tons per year of Carbon Monoxide (CO). A telephone conversation of April 7, 1997, with Mr. Hitchcock of GSL and Robert Baldwin of DEQ was made to explain this situation. An agreement was reached to reduce the hours of operation for the boilers and kilns to 6000 hours annually. The following emissions were determined on the annual operating hours of 6000.

CO is the pollutant that triggered major source status for GSL. The operating hours for GSL have been reduced (upon agreement with Richard Hitchcock, owner of GSL) to enable GSL to acquire a Tier II permit.

The applicant chose to net out of Tier I permitting by limiting the potential to emit CO to less than 100 T/yr. The applicant proposed the following enforceable limit of 6000 hours of operation annually.

The calculations for the two dutch oven boilers were based on the maximum throughput of fuel and the emission factor from AP-42. The average mean emission factor was used for CO to recognize that the boilers were installed in 1930 and that the annual moisture in this region is approximately 40 inches.

Upon examination of the material submitted during the public comment period, compliance testing requirements for emissions of particulate matter and carbon monoxide flow have been added to the Tier II permit.

The values for the maximum fuel usage, emission factors, and hours of operation for each emission unit can all be found in appendix A of this memorandum.

Modeling was not performed for this facility.

Compliance determination shall be based on the sections, OPERATING REQUIREMENTS and MONITORING AND RECORDKEEPING REQUIREMENTS, in the permit. Compliance with the annual emission standard is based on the most recent twelve (12) months of product volume data. This is due to the product volume being the parameter of concern when calculating the emissions.

2. Area Classification

Gem State Lumber a facility is located in Juliaetta, Latah County, Idaho. This area is located in AQCR 62. The area is classified as attainment for all criteria air pollutants.

3. Facility Classification

The facility is not a designated facility as defined in IDAPA 16.01.01.25. The facility is classified as an A2 source because the actual emissions of CO is less than 100 tons per year.

4. Regulatory Review

This operating permit is subject to the following permitting requirements:

- | | |
|--------------------------------------|--|
| a. <u>IDAPA 16.01.01.401</u> | Tier II Operating Permit. |
| b. <u>IDAPA 16.01.01.403</u> | Permit Requirements for Tier II Sources. |
| c. <u>IDAPA 16.01.01.404.01</u> | Opportunity for Public Comment. |
| d. <u>IDAPA 16.01.01.404.04</u> | Authority to Revise Operating Permits. |
| e. <u>IDAPA 16.01.01.406</u> | Obligation to Comply. |
| f. <u>IDAPA 16.01.01.470</u> | Permit Application Fees for Tier II Permits. |
| g. <u>IDAPA 16.01.01.625</u> | Visible Emission Limitation. |
| h. <u>IDAPA 16.01.01.650</u> | General Rules for the Control of Fugitive Dust. |
| i. <u>IDAPA 16.01.01.675&677</u> | Fuel Burning Equipment - Particulate Matter. Standards for Minor and Existing Sources. |

FEES

Fees apply to this facility in accordance with IDAPA 16.01.01.470. The facility is subject to permit application fees for Tier II permits of five hundred dollars (\$500.00). IDAPA 16.01.01.470 became effective on March 7, 1995.

RECOMMENDATIONS

Based on the review of the Operating Permit application and on applicable state and federal regulations concerning the permitting of air pollution sources, the Bureau recommends that Gem State Lumber in Juliaette be issued a Tier II Operating Permit for the sources that exist at the facility. An opportunity for public comment shall be provided as required by IDAPA 16.01.01.404.01. Staff members also recommend that the facility be notified of the Tier II permit fee requirement in writing. This fee will be applicable upon issuance of the permit.

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cc: J. Bellatty, Lewiston Regional Office
Source File
COF

APPENDIX A

GEM STATE LUMBER - JULIAETTE

HOURLY (lb/hr) and ANNUAL (T/yr) POINT SOURCE EMISSION LIMITS*

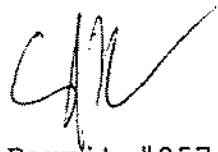
Source	PM		CO		NO _x		SO _x		VOC	
	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
Boiler #1 205 HP	7.9	23.8	11.9	35.7	0.4	1.3	0.1	0.2	0.2	0.7
Boiler #2 150 HP	5.8	17.4	8.7	26.1	0.3	0.9	0.1	0.2	0.2	0.5
Shaving Bin Cyclone	0.5	0.1								
Boiler Fuel Shavings Cyclone	0.5	0.1								
Dry Kiln #1	0.1	0.3							1.2	3.6
Dry Kiln #2	0.1	0.3							1.2	3.6

- a. As determined by a pollutant specific U.S. EPA reference method, DEQ approved alternative, or as determined by DEQ's emission estimation methods in the permit application analysis.

November 28, 1997

MEMORANDUM

TO: Orville D. Green, Assistant Administrator
Air & Hazardous Waste

FROM: Susan J. Richards, Chief
Air Quality Permitting Bureau 

SUBJECT: Issuance of Tier II Operating Permit #057-00007 to
Gem State Lumber Company (Juliaetta)

PURPOSE

The purpose of this memorandum is to satisfy the requirements of IDAPA 16.01.01 Sections 400 through 406 (Rules for the Control of Air Pollution in Idaho) for issuing Operating Permits.

PROJECT DESCRIPTION

This project is for the issuance of a Tier II Operating Permit (OP) to Gem State Lumber Company. The Tier II OP will establish the sawmill facility as a synthetic minor source.

SUMMARY OF EVENTS

On February 18, 1997, The Division of Environmental Quality (DEQ) received Gem State Lumber's Tier II operating permit application. After review of the material submitted, DEQ determined that the application was administratively complete on March 20, 1997. On October 3, 1997, a proposed Tier II OP was issued for public comment. The public comment period was held from October 15, 1997, through November 14, 1997. Comments were received from Gem State Lumber on November 3, 1997, and DEQ's responses are enclosed.

RECOMMENDATIONS

Based on the review of the OP application, applicable state and federal regulations concerning the permitting of air pollution sources, the Bureau staff recommends that Gem State Lumber Company be issued a Tier II OP for the sawmill facility. Staff also recommends that the facility be notified in writing of the obligation to pay permit application fees for the proposed Tier II permit.

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Enclosure

cc: Lewiston Regional Office
OP File Manual
Source File
COF